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BEST PRACTISES OF TEST DATA MANAGEMENT - PART 1

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ABSTRACT

The purpose of this document is to provide data management standards and practices as they apply to manage, monitor and control the data. The majority of text was taken directly from the information resources listed under the references. In some instances, text from these resources was modified to facilitate the document's ease of reading or to reflect the compilers' understanding of current data management practices.

INTRODUCTION

Summary

Data management is a process involving a broad range of activities from administrative to technical aspects of handling data. Good data management practices include:

- A data policy that defines long-term goals startegically and provides guiding principles/rules for data management in all aspects of a project.
- Clearly defined roles and responsibilities for those associated with the data, in particular of data providers and data owners.
- Data quality procedures (e.g., quality assurance, quality control) at all stages of the data management process.
- Verification and validation of accuracy of the data.

Introduction

- IT Policy and Administration
- Accumulation and Preserve
- Data Lasting and Use

IT Policy and Administration

A sound and strategic data policy defines long-term goals for data management in all aspects of a IT project.

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A data policy is a set of high-level principles that establish a guiding framework for data management. A data policy can be used to address strategic issues such as data access, relevant legal matters, data stewardship issues and custodial duties, data acquisition, and other issues. Because it provides a high-level framework, a data policy should be flexible and dynamic. This allows a data policy to be readily adapted for unanticipated challenges, different types of projects, and potentially opportunistic partnerships while still maintaining its guiding strategic focus (Burley and Peine 2007). Following are the factors need to be considered: (will be published in next article)

Data policy
Roles and responsibilities
Data ownership
Data custodianship

Accumulation and preserve

Quality as applied to data has been defined as "fitness for use" or "potential use." Many data quality principles apply when dealing with species data and with the spatial aspects of those data. These principles are involved at all stages of the data management process, beginning with data collection and capture. A loss of data quality at any one of these stages reduces the applicability and uses to which the data can be adequately put (Chapman 2005a). These include: data capture and recording at the time of gathering, data manipulation prior to digitization (label preparation, copying of data to a ledger,

etc.), identification of the collection (specimen, observation) and its recording, digitization of the data, documentation of the data (capturing and recording the metadata), data storage and archiving, data presentation and dissemination (paper and electronic publications, web-enabled databases, etc.), and using the data (analysis and manipulation). All of these affect the final quality or ?fitness for use? of the data and apply to all aspects of the data. Data quality standards may be available for accuracy, precision, resolution, reliability, repeatability, reproducibility, currency, and relevance, ability to audit, completeness, and timeliness. Following Factors need to be in consideration: (will be published in next article)
Data quality

Data documentation and organization
Dataset titles and file names
File contents
Metadata
Data standards
Data life cycle control (use ER Model) – release by maintenance.
Data specification and modeling (database design)
Database maintenance
Data audit (on timely manner)
Data storage and archiving

Data lasting and use

Security involves the system, processes, and procedures that protect a database from unintended activity. Unintended activity can include misuse, malicious attacks, inadvertent mistakes, and access made by individuals or processes, either authorized or unauthorized. For example, a common threat for any web-enabled system is automated software designed to exploit system resources for other purposes via vulnerabilities in operating systems, server services, or application. Physical equipment theft or sabotage is another consideration. Accidents and disasters (such as fires, hurricanes, earthquakes, or even spilled liquids) are another category of threat to data security. Efforts should be made to stay current on new threats so that a database and its data are not put at risk. Appropriate measures and safeguards should be put in place for any feasible threats (Burley and Peine 2007).

In most organizations, the information system itself will continually be expanded and updated, its components changed, and its software applications replaced or updated with newer versions. In addition, personnel changes will occur and security policies are likely to change over time. These changes mean that new risks will surface and risks previously mitigated may again become a concern. Thus, the risk management process is ongoing and evolving. Following are the factors: (will be published in next article)

Data security
Data access, data sharing and dissemination
Data publishing.

Conclusion

Data management is increasingly recognized as an important component of effective data use in biodiversity conservation. Methods, best practices, and standards for management of biodiversity data have been developed by the bioinformatics community over the past fifteen years to facilitate electronic data access and use. These methods and best practices range from defining policies, roles, and responsibilities for data management; organizing, documenting, verifying, and validating data to enhance its quality; managing for the entire data life-cycle from design of a database to storage and archiving of data; to disseminating data by providing appropriate access while maintaining security of the data. As best data management practices and standards become more widely used in the management of monitoring data, their adoption and implementation will increase utility of this data in providing the information needed for research, management, and conservation of Data.

REFERENCES

Burley, T.E. and J.D. Peine. 2007. NBII-SAIN Data Management Toolkit. Online: Accessed May 2009. < http://pubs.usgs.gov/of/2009/1170/>
Burley, T.E. and J.D. Peine. 2007. NBII-SAIN Data Management Toolkit. Online: Accessed May 2009. < http://pubs.usgs.gov/of/2009/1170/>

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